



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/701,777 12/01/00 SATO

H Y-176

DELLETT & WALTERS  
SUITE 1101  
310 SW FOURTH AVENUE  
PORTLAND OR 97204

MM91/1011

EXAMINER

MOUTTET, R

ART UNIT

PAPER NUMBER

2853

DATE MAILED:

10/11/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

**BEST AVAILABLE COPY**

**Office Action Summary**

Application No.

09/701,777

Applicant(s)

SATO, HITOSHI

Examiner

Blaise L Mouttet

Art Unit

2853

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 December 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 4, 5, 7, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Miller et al. US 5,731,823.

Miller et al. discloses, regarding claim 1, an ink jet recording method comprising:  
converting vector data to raster data (step 60 as shown in figure 3A);  
before converting vector data to raster data, checking by an interpreter (30, column 4, lines 42-45) whether the data pattern (56) indicates solid-drawing in a thick line or filled in area for which drawing is indicated (step 80, column 6, lines 27-36); and  
if the data pattern indicates solid-drawing, changing the data pattern to a lower-density pattern thereby preventing ink splash during printing (column 9, line 59 - column 10, line 6).

Miller et al. discloses, regarding claim 7, an ink jet recording device comprising:  
an interpreter (30) for analyzing a command and data which indicate a drawing of a thick line or filled in area (column 4, lines 42-45, column 6, lines 27-36);  
means for converting vector data of the thick line or filled in area into raster data based on the given data pattern after analysis by the interpreter (inherent from step 60 as shown in figure 3A); and

Art Unit: 2853

a recording head (20, 22) for ejecting ink droplets, based on the raster data, while moving over a recording medium (15) with a plurality of ink ejection nozzles arranged thereon (column 3, lines 1-17),

wherein said interpreter includes a pattern changing means for checking whether the data pattern indicates solid drawing in each of the thick line or the filled in area for which the drawing is indicated and, if the solid-drawing is indicated, changing the data pattern to a lower density pattern (column 9, line 59 - column 10, line 6).

Regarding claims 4 and 10, see column 9, lines 59-66.

Regarding claims 5 and 11, see column 6, lines 40-45.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. US 5,731,823 in view of Rylander US 5,602,572.

Miller et al. disclose that the input data is changed by halftoning techniques (figure 3, steps 104, 124).

Miller et al. fails to disclose that this halftoning is performed using a predetermined mask pattern.

Rylander discloses using mask patterns (figure 1, figures 7-9) to perform halftoning.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a predetermined print mask as shown by Rylander in the apparatus and method of Miller et al.

The motivation for doing so would have been that Miller et al. discloses that using printmasks is an art-recognized equivalent method to perform the halftoning as disclosed by Rylander and using the printmasks of Rylander allows for a wide range of shade value while avoiding overinking as taught by column 2, lines 29-34 of Rylander.

3. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. US 5,731,823 in view of Rylander US 5,602,572, as applied to claims 2 and 8, and further in view of Mizutani US 5,774,146.

Miller et al. in view of Mizutani fail to disclose choosing from a plurality of mask patterns the mask pattern appropriate to the recording medium.

Mizutani discloses choosing from a plurality of mask patterns the mask pattern appropriate to the recording medium in a printing device (column 5, lines 8-17, abstract).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to choose from a plurality of mask patterns the mask pattern appropriate to the recording medium as taught by Mizutani in the apparatus and method of Miller et al. in view of Rylander.

The motivation for doing so would have been in order to properly compensate for ink permeation into the recording medium by adjusting the printmask as taught by column 2, lines 4-18 and column 5, lines 8-16 of Mizutani so that a proper image can be formed.

4. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. US 5,731,823 in view of Albosta et al. US 4,908,638.

Miller et al. fails to disclose printing in a single-pass method in which one band corresponding to a width of the recording head is formed on the recording medium in one movement.

Albosta et al. teaches of an inkjet printhead that prints in a single pass mode (column 4, lines 12-14).

It would have been obvious for a person of ordinary skill in the art at the time the invention was made to print in a single pass mode with the inkjet printhead in the apparatus and method of Miller et al.

The motivation for doing so would have been in order to achieve high speed printing as taught by column 4, lines 12-14 of Albosta et al.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2853

Yamada et al. US 4,649,500 discloses collecting data on the amount of ink to be fed to regions of reproduction in a printing system and using this information to control ink feeding (see abstract).

Smith et al. US 5,704,021 discloses identifying different types of objects in a document to be printed and selecting preferred processing techniques to be utilized in accordance with the object types (see abstract).

Ueda et al. US 6,008,812 discloses identifying image data from input information and using this information to determine printing attributes given this information (see figure 4).

**Contact Information**

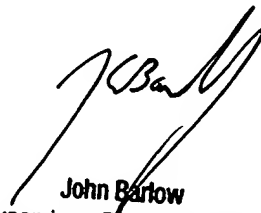
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Blaise Mouttet whose telephone number is (703) 305-3007. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow, Jr. Art Unit 2853, can be reached on (703) 308-3126. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Blaise Mouttet October 3, 2001

Bm OCTOBER 3, 2001

  
John Barlow  
Supervisory Patent Examiner  
Technology Center 2800